

# Introduction to Lean

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# What Is Lean?

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**Lean** is a set of principles and methods for identifying and eliminating waste (non-value added activity ) in any process.

# Why Do We Need Lean?

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All Processes can benefit from Evaluation and have room for Improvement

- Reduced process complexity
- Reduced rework
- Staff ownership/empowerment
- High quality products

# What Makes Lean Different?

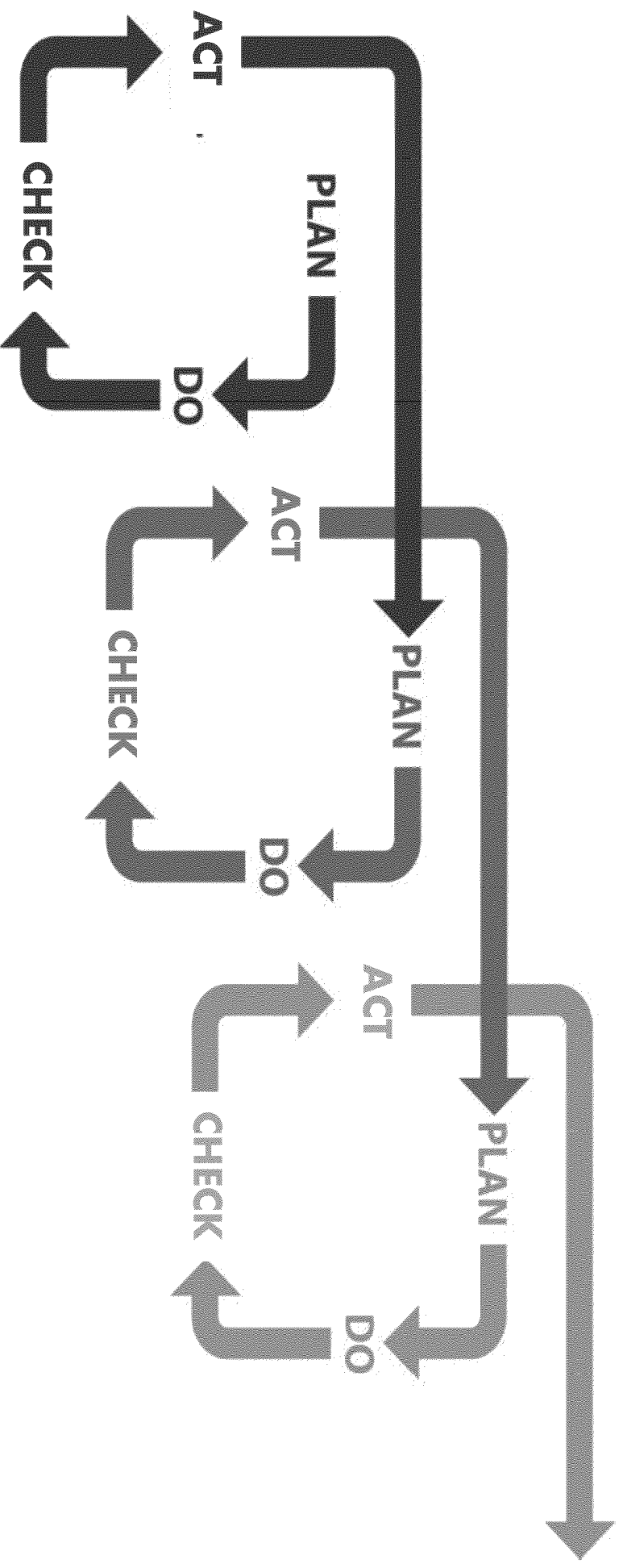
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Emphasis on:

- Workforce empowerment
- Rapid, real-time change
- *Doing* over planning
- Building and sustaining momentum
- Tracking progress

# How Does Lean Work?

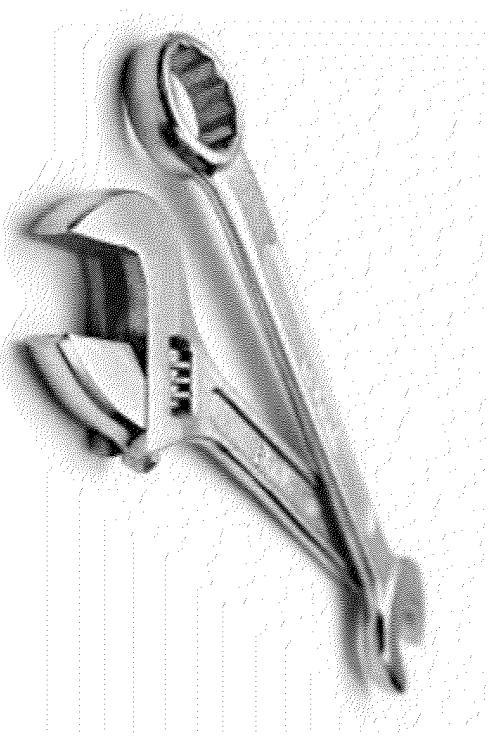
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# Concepts & Tools

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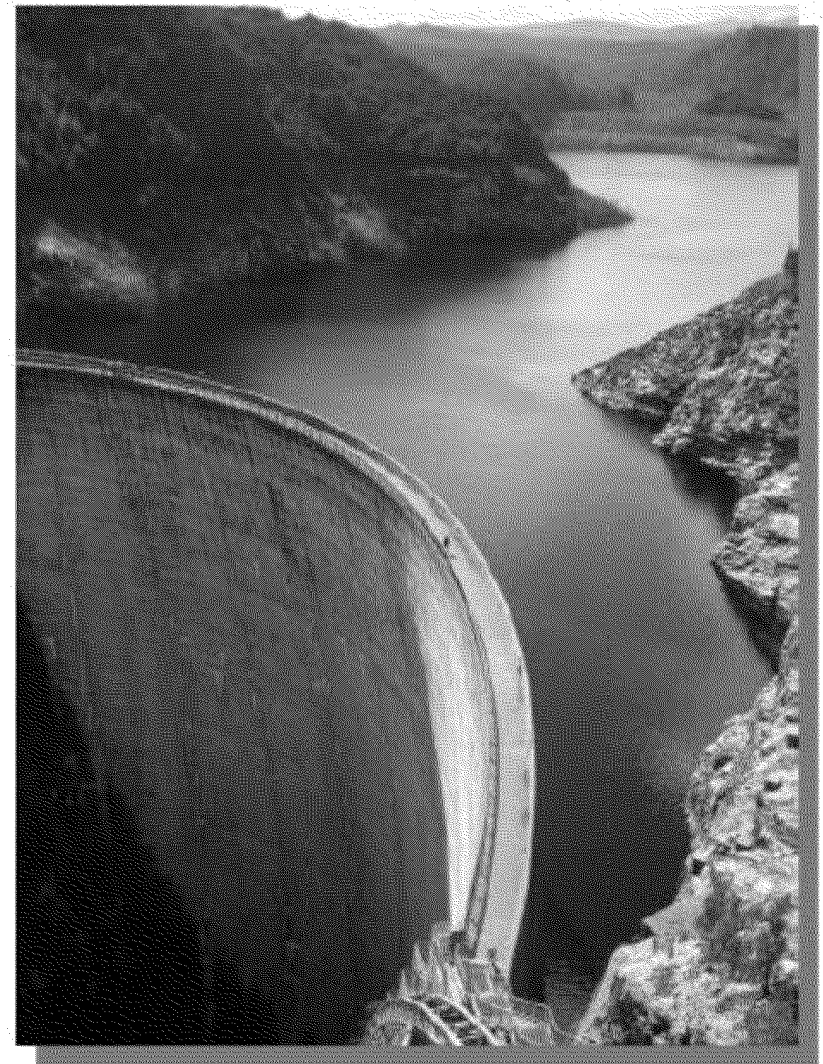
- Value added vs. non-value added
- Process wastes (DOWNTIME)
- 5 Whys
- Process Mapping
- Kaizen Event
- 5S



# Forms of Waste = DOWNTIME

♦ When you have **DOWNTIME** you encounter one of the 8 forms of Waste.

- ♦ **D** – Defects
- ♦ **O** – Over Producing
- ♦ **W** – Waiting
- ♦ **N** – No Injuries
- ♦ **T** – Transportation
- ♦ **I** – Inventory
- ♦ **M** – Motion
- ♦ **E** – Excessive Processing





# Value Added vs. Non-Value Added

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## Value Added

## Non-Value Added

- Task or action customer would be willing to pay for
- Consumes resources without directly creating value
- Transforms a product or service in form, fit, and/or function
- Requires more time, effort, or resource than it has to
- Done correctly the first time
- Can be removed to focus on value-added steps

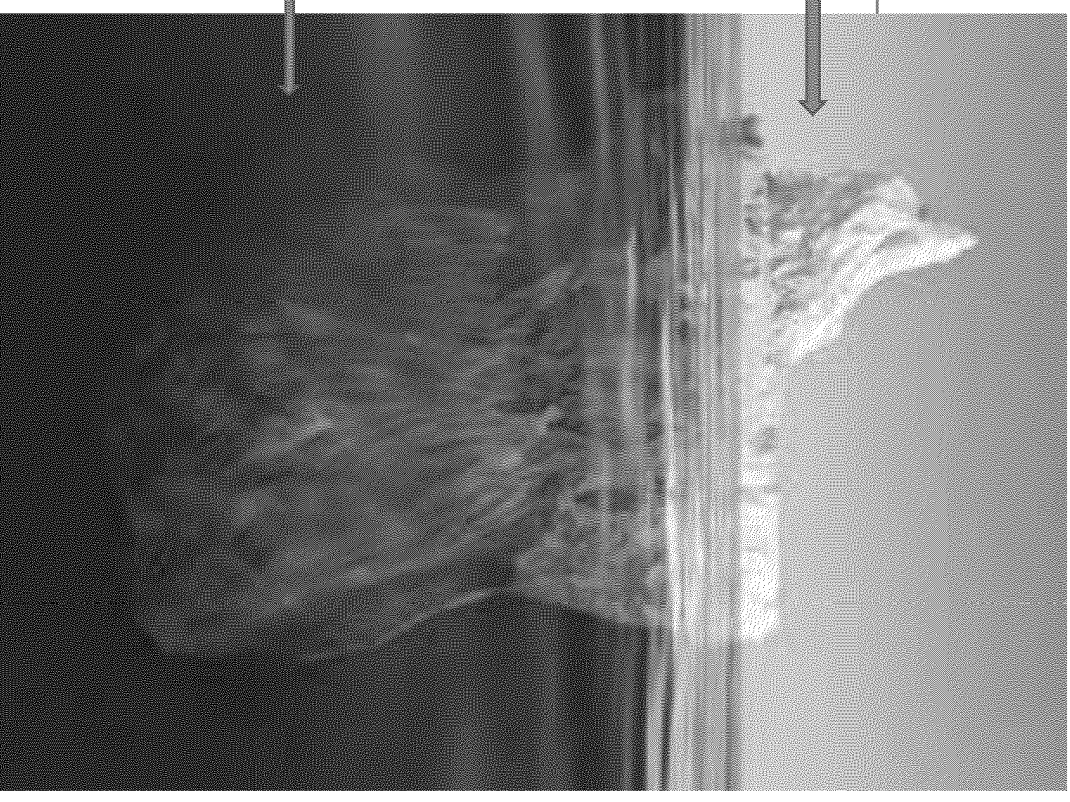
Third category: **Necessary**, although the step may not add value from the customer's perspective



# Problem Solving

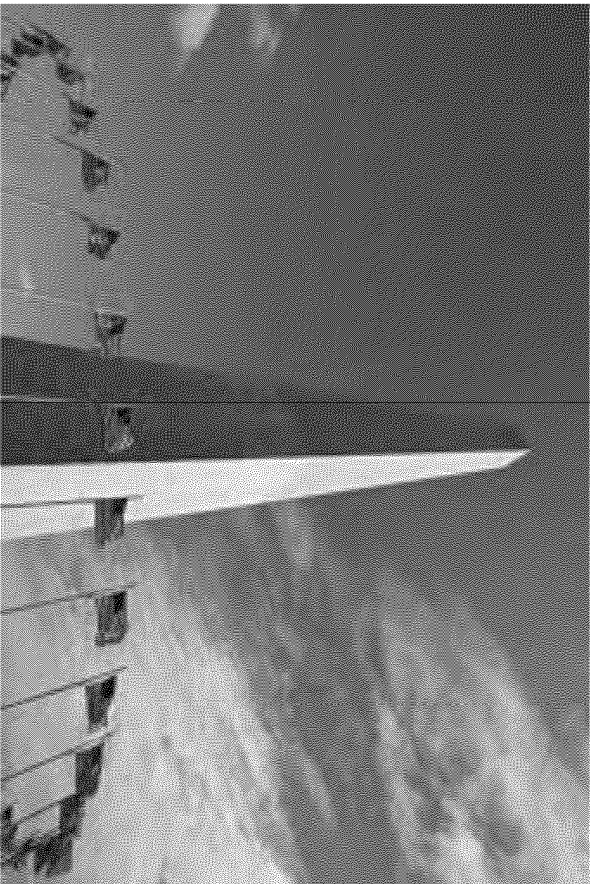
**Symptoms:** You —————  
see it, people talk  
about it; it is  
visible!

**Root Cause:** The one  
to address. It is often —————  
hidden. You need to  
find it!



Defining the “*wrong*” problem wastes considerable time looking in the *wrong* direction for a solution.

# 5 Whys



**Problem Statement:** The Washington Monument is disintegrating.

**Solution/Root Cause:** Turn lights on at a later time. →

**Why 1: Why is the Washington monument disintegrating?**

Use of harsh chemicals.



**Why 2: Why use harsh chemicals?**  
To clean pigeon poop.



**Why 3: Why so many pigeons?**  
They eat spiders and there are a lot of spiders at the monument.



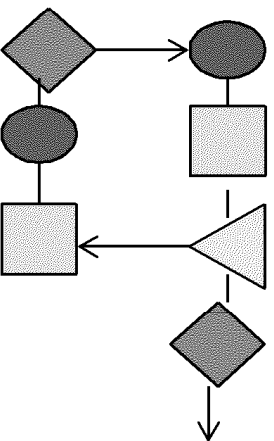
**Why 4: Why so many spiders?**  
They eat gnats and there are lots of gnats at the monument.



**Why 5: Why so many gnats?**  
They are attracted to the light at dusk.

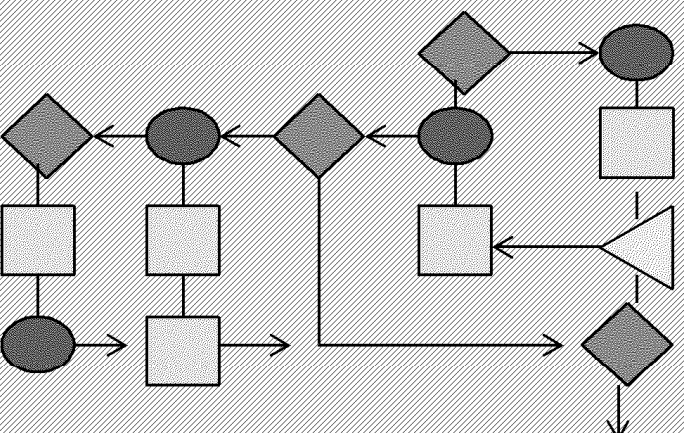
# Mapping the Process

What we think  
the process looks  
like....

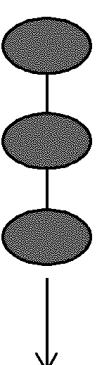


Mapping the process  
means we get to see *what*  
*actually happens*, not just  
what is written on paper.

**What it  
actually looks  
like....**



What we  
would like it  
to look like....





# What Is a Kaizen Event?

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- 3-5 day event with cross-functional team
- Requires strong leader commitment and experienced facilitator
- Team receives training on Lean methods before and during event
- Map the current process
- Identify waste
- Identify improvement opportunities
- Map a new, improved process
- Create implementation plan



Kaizen event in Region 10

*Kaizen is a Japanese term meaning “to take apart and make good.” It’s a facilitated, team-driven rapid improvement event.*

# How to Select a Lean Project?

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## CRITERIA

- Manageable in scope
- Addresses an important process
- Clear improvement needs
- Supportive management

## Signs of Inefficient Processes

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- Backlogs and process bottlenecks
- People are working hard, but not much seems to be getting done
- Things aren't done in time; schedules slip
- Lots of handoffs and reviews
- Rework/redo loops
- Processes are unnecessarily complex; involve excess steps
- Internal or external customers complain about the process

# Questions or comments?

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